

CUTTING RISK: ON INDIA'S ANTI-POLIO DRIVE

Relevant for: Developmental Issues | Topic: Health & Sanitation and related issues

The world polio day on October 24 marked an important milestone in the war against polio when the Global Commission for the Certification of Poliomyelitis Eradication officially declared that wild poliovirus type 3 has been eradicated. The last case of wild poliovirus type 3 was seen in northern Nigeria in 2012. This is the second wild poliovirus to be declared eliminated — the first was in 2015 when type 2 wild poliovirus was declared as eliminated. With two of the three wild polioviruses eliminated, only type 1 wild poliovirus is still in circulation and is restricted to just two countries — Afghanistan and Pakistan. As on October 23, there were 18 cases of polio caused by wild virus type 1 in Afghanistan and 76 polio cases in Pakistan this year. While the number of cases reported this year from Afghanistan is quite close to the 21 reported last year, there has been over six-fold increase in the number of cases in Pakistan. Though India has excellent polio immunisation coverage and measures have been put in place to prevent the spread from polio-endemic countries, there is no room for complacency.

What does the official declaration of wild type 3 poliovirus elimination mean in the war against polio? Put simply, it opens up the possibility of switching from the currently used bivalent oral polio vaccine containing type 1 and type 3 to a monovalent vaccine containing only type 1. The globally synchronised switch in April 2016 from a vaccine containing all the three types (trivalent) to a bivalent vaccine was done to reduce the number of vaccine-derived poliovirus (VDVP) cases. Until 2015, the type 2 strain in the trivalent oral vaccine accounted for over 90% of VDVP cases globally. While the type 3 poliovirus in the vaccine is the least likely to cause vaccine-derived polio, it has the greatest propensity to cause vaccine-associated paralytic polio (VAPP). Though the risk of VAPP is small, it is caused when the live, weakened virus used in the vaccine turns virulent in the intestine of the vaccinated child or spreads to close contacts who have not been immunised. VAPP can be greatly reduced if there is a switch from the bivalent to a monovalent vaccine containing only type 1. Alternatively, the risk of VAPP can be reduced 80-90% if every child receives the bivalent vaccine and one dose of inactivated polio vaccine injection. Though India does not count VAPP cases, a 2002 paper and a communication indicated that India had 181, 129 and 109 cases in 1999, 2000 and 2001, respectively. A recent paper suggests that post 2016, India might have 75 VAPP cases annually due to global IPV vaccine shortage and “delay in IPV implementation in India’s national immunisation programme”.

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